

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 November 2004 (04.11.2004)

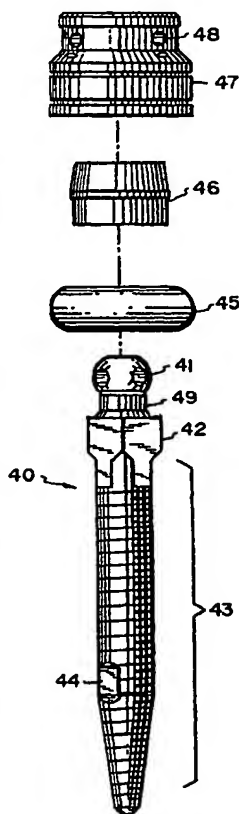
PCT

(10) International Publication Number
WO 2004/093707 A3

- (51) International Patent Classification⁷: **A61C 8/00**
- (21) International Application Number:
PCT/US2004/010567
- (22) International Filing Date: 5 April 2004 (05.04.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/464,958 23 April 2003 (23.04.2003) US
60/532,385 26 December 2003 (26.12.2003) US
- (71) Applicants and
(72) Inventors: **BULARD, Ronald, A.** [US/US]; 2405 Oak Hollow W.W., Ardmore, OK 73401 (US). **HADWIN, Stephen, J.** [US/US]; 1606 Rosedale Street, Ardmore, OK 73401 (US).
- (74) Agent: **BRISCOE, Kurt, G.**; Norris McLaughlin & Marcus, P.A., 875 Third Avenue, 18Th Floor, New York, NY 10022 (US).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

[Continued on next page]

(54) Title: ONE PIECE DENTAL IMPLANT AND USE THEREOF IN PROSTODONTIC AND ORTHODONTIC APPLICATIONS



(57) Abstract: The specification describes one-piece dental implants (40) comprising a threaded shaft (43), optionally a non-circular abutment (42) and a head (41) having a shape which is capable of accepting a keeper cap or an O-ring, or which is capable of accepting and retaining a dental wire. The implants (40) have dimensions that permit their use in a non-surgical method of insertion into bone, and are useful in both prosthodontic and orthodontic applications.

WO 2004/093707 A3



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
27 January 2005

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/10567¹

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61C 8/00

US CL : 433/173

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 433/173,174,172,179,169,18

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0127510 A1 (KYUNG et al.) 12 September 2002 (12.09.2002), see entire document.	1-10,14-16
X	WO 00/64369 A1 (SENDAX et al) 02 November 2000 (02.11.2000), see entire document.	11-13



Further documents are listed in the continuation of Box C.



See patent family annex.

<p>* Special categories of cited documents:</p>		<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p>	
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

22 September 2004 (22.09.2004)

Date of mailing of the international search report

21 OCT 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Melba Bumgarner

Telephone No. 703-308-0858